

REMARKS/ARGUMENTS

Applicant responds herein to the final Office Action mailed August 10, 2006, in the above-identified application.

Claims 1-30 are the claims currently pending in the present application.

Independent claims 1, 6, 11, 16, 21 and 26 are amended to clarify features recited thereby. These amendments to the claims are fully supported by applicant's disclosure, see for example, page 6, lines 15-16, and page 20, lines 9-11.

Rejection of Claims 1-30 under 35 U.S.C. § 103

Claims 1-30 are rejected under 35 U.S.C. § 103 as being obvious based on Koji, Japan Patent Publication No. 11-268827 in view of Shinbara, U.S. Patent No. 5,485,644. Reconsideration of this rejection is respectfully requested.

According to an aspect of applicant's claimed invention, a third opening and a third shutter member are provided between the first processing chamber that serves as the liquid chemical processing chamber, and the second processing chamber, that serves as a rinse and dry processing chamber. Accordingly, the atmosphere within the first processing chamber is isolated from the atmosphere within the second processing chamber, and thus exposure of the liquid chemical in the first processing chamber to water vapor or drying gases is prevented and a substrate being subjected to a rinse and dry processing in the second processing chamber is protected from exposure to components of the liquid chemical. Further, according to an aspect of applicant's invention, the atmosphere within the first and second processing chambers is continuously replaced by an inert gas. Thus, liquid chemical components generated in the first processing chamber, and water vapor and unnecessary drying gas generated in the second processing chamber are immediately replaced by an inert gas, thus preventing the transfer of the liquid chemical components, water vapor and drying gas between the first and second processing chambers when the third shutter opens.

For at least the following reasons, the claims of the present application are neither anticipated by nor obvious from the cited art. By way of example, independent claims 1, 6, 11, 16, 21 and 26 require a third opening between the first and second processing chambers, the third

opening allowing substrates to pass therethrough, and a third shutter member for exposing and blocking said third opening, said third shutter member being effective in a closed state to isolate the atmosphere within said processing chamber. Further, claims 1, 6, 11, 16, 21 and 26 require, *inter alia*, that the atmosphere within the first and second processing chambers be continuously replaced by an inert gas.

Koji discloses a substrate processing device. However, Koji fails to disclose the third opening and the third shutter member, as acknowledged by the Examiner (Office Action, page 3). Further, Koji does not disclose or suggest continuously replacing the atmosphere within the processing chamber by inert gas.

Shinbara discloses a substrate treatment apparatus, in which a transport unit 6 is arranged between a surface cleaning unit 3 and a rinsing and drying unit 4, with an unshown shutter isolating and transport unit 6 between the surface cleaning unit 3 and the rinsing and drying unit 4 (Shinbara, column 3, lines 16-19; Figure 2). Shinbara discloses that the surface cleaning unit 3 is a processing chamber that supplies deionized water to a substrate (Shinbara, Abstract, lines 8-10; column 3, lines 20-21).

Therefore, Shinbara does not disclose or suggest providing an opening and a shutter between a liquid chemical processing chamber and a rinse and dry processing chamber. That is, Shinbara discloses that the substrate processing apparatus performs processing while rotating substrates in order. Accordingly, the substrate processing apparatus of Shinbara includes a shutter to prevent water droplets from dispersing around the substrate. Therefore, Shinbara does not disclose or suggest a shutter that prevents liquid chemical components from entering the next processing chamber. Shinbara does not disclose or suggest that liquid chemicals are used in the substrate processing apparatus.

Further, Shinbara does not disclose or suggest continuously replacing the atmosphere within the processing chamber by an inert gas, as further required by independent claims 1, 6, 11, 16, 21 and 26. Accordingly, Koji and Shinbara, even taken together in combination, do not disclose or suggest the recitations of independent claims 1, 6, 11, 16, 21 and 26.

Moreover, the Examiner has cited no adequate motivation found in the cited art for combining the teachings of the cited references to arrive at the proposed combination. For

example, it is respectfully submitted that there is no motivation provided for combining the shutter of Shinbara with the substrate processing apparatus of Koji. Accordingly, it is respectfully submitted that the recitations of independent claims 1, 6, 11, 16, 21 and 26 would not have been obvious to a person of ordinary skill in the art based on Koji and Shinbara.

Claims 2-5 depend from independent claim 1, claims 7-10 depend from independent claim 6, claims 12-15 depend from independent claim 11, claims 17-20 depend from independent claim 16, claims 22-25 depend from independent claim 21, and claims 27-30 depend from independent claim 26. Therefore, claims 2-5, 7-10, 12-15, 17-20, 22-25, and 27-30 are patentably distinguishable over the cited art for at least the same reasons as their base claims.

Conclusion

In view of the foregoing discussion, withdrawal of the rejection and allowance of the application are respectfully requested.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended and pass this case to issue.

Should the Examiner have any questions regarding the present Amendment, or regarding the application generally, the Examiner is invited to telephone the undersigned attorney at the below-provided telephone number.

THIS CORRESPONDENCE IS BEING
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Respectfully submitted,



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